

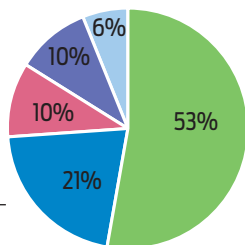
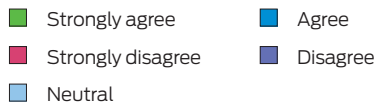
An artificial leaf designed by scientists at Eindhoven University of Technology, Netherlands. The leaf acts as a mini-factory for producing drugs, an advance that could allow medicines to be produced anywhere there is sunlight.

Photo: Jim Drury/Reuters/Picture Media

MJA InSight Poll

Too many men with early-stage prostate cancer are being overtreated and underinformed

Total votes = 267



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MJA Podcast



Dr Lisa Whop is a research fellow with the National Indigenous Cervical Screening Project, Menzies School of Health Research at Charles Darwin University. She discusses her co-authored research on the time from abnormal pap smear to clinical investigation for Indigenous and non-Indigenous Queensland women, published in this issue.

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Yoga's minimal benefit for lower back pain

A systematic review published in the Cochrane Library has found that yoga may help people with chronic non-specific lower back pain, at least initially, compared with no exercise but the effect was not clinically significant, and diminished over time. The review summarised the results of 12 randomised trials from 1080 men and women with an average age between 34 and 48 years old. The trials were conducted in India, the UK, and the US. The researchers included studies that compared practising yoga in a class to not doing any back-focused exercise, or to other forms of exercise. Seven studies compared yoga with no exercise, three studies compared yoga with back-focused exercise, or added yoga for a back-focused exercise program. Two studies compared yoga with two other forms of control group: no exercise or a self-care book. All yoga interventions used were specifically designed for treatment of lower back pain, and were provided by experienced and qualified teachers. They found that compared to no exercise, practising yoga might improve back-related function and may also reduce symptoms of lower back pain by a small amount in the first 6 to 12 months, although the effect was consistently less than that judged to be clinically important. However, larger and more robust studies with longer follow up are needed to draw any firm conclusions about the long-term health effects of yoga. They also found that yoga may cause an increase in back pain in some people. About 5% more yoga participants experienced increased back pain, although this may be similar to the risk of having side effects from other back-focused exercise.

<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010671/abstract>

Link between HIV treatment and syphilis in men

Research from Canada and South Africa has found a possible link between the antiretroviral drugs used in HIV treatment and a rise in gay and bisexual men's susceptibility to the bacteria responsible for syphilis, *Treponema pallidum*. Published in *Sexually Transmitted Infections*, the research suggests that the behavioural changes caused by the availability of

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high active antiretroviral treatment (HAART) could not completely explain the rise. "It's not clear why rates of syphilis among gay and bisexual men should be so much higher than those of chlamydia or gonorrhoea, especially as HAART boosts immune system activity, and so would be expected to lower susceptibility to infections," the researchers wrote. They used two risk "models" to test the likelihood of syphilis infection: one (lower risk) which compared HAART with no treatment in an HIV positive partner; and the other (higher risk) which compared existing infection with no infection in a partner who was either HIV negative or positive. Behaviour change was taken to mean that HAART would result in more sexual partners; and immune system changes were taken to mean that HAART would boost susceptibility to *Treponema pallidum*. The calculations showed that either factor could produce outbreaks of syphilis that would be substantially higher than expected, but that both factors combined produced a peak in the number of infections that was greater than that associated with either factor alone — and equivalent to the sorts of figures seen in the current outbreak. This suggests that there's an interplay between behavioural change and immune system changes, wrote the researchers, who offer a possible explanation for a biological effect on the immune system. "The body's clearance of *T pallidum* relies on an increase in the number of T cells and a cascade of chemicals that stimulate an inflammatory response. HAART dampens down these activities. Clearance of chlamydia and gonorrhoea is less reliant on these processes," they wrote.

<http://dx.doi.org/10.1136/sextrans-2016-052893>

Cate Swannell doi: 10.5694/mja17.n0602